

March 2007



Safety is our most important Product!

There are many horror stories told about Li-Po batteries, fires and the burning down of homes or the burning up of vehicles. If it can some day it probably will so charge the packs where a fire can't spread or do collateral damage.

The Presidents Soapbox

The annual club elections are now history. Scott Enochs is the new President, Don Schultz remains in office as Secretary-Treasurer, Bruce Graham and Kelly Martin return as board members, Cliff Pemberton is a new board Member, and Bob Beardsley the new alternate board member. Scott Enochs is also the new AMA Safety Coordinator and Cliff Pemberton the new Safety Officer. The office of Vice President is open....and so the call for a volunteer to fill the position. The primary duties of the VP are to coordinate the training program and club events. The key here is the word "coordinate". The VP does not need to be the one who actually performs flight training or is the CD of any events we might have... if he can "gently coerce" others into performing those tasks. Given our current club budget the focus of the VP needs to be on

flight training rather than club events. If we can recruit new members and get them adequately trained through our regular Saturday morning training schedule or by appointment we improve the long-term health of our club. The VP, along with the other officers and board members, also sets policy and direction for the club. A volunteer would be very welcome! If you'd like to help with this please e-mail me at president@flyaways.org, call me at 662-3398, or just talk to me at the field.

It's probably appropriate for my first newsletter column to give you an overview of my philosophy and general goals I have for the club. My major goal is to work towards developing a 1st class flying facility. If we have a great place to fly, then things like promoting the club, growing and maintaining membership, generating \$\$\$ to maintain

Continued on page 5

**The next meeting is:
March 19th
At the Kinton Grange**

General Meeting 7:00 pm



Hi Guys, meet my cousin Arnold Earl. Ya, you guessed it, he's from Kal-e-Fornya. Lives right next to the Governor's Gym. Pretty cool, he carried a 100 lb sack of Walnuts all the way up here from Sacramento. See ya next month. **SQ Earl Jr**

SR71 - Speed is King

An excerpt from "Sled Driver" by Brian Shul

There were a lot of things we couldn't do in an SR-71, but we were the fastest guys on the block and loved reminding our fellow aviators of this fact. People often asked us if, because of this fact, it was fun to fly the jet. Fun would not be the first word I would use to describe flying this plane. Intense, maybe even cerebral. But there was one day in our Sled experience when we would have to say that it was pure fun to be the fastest guys out there, at least for a moment. It occurred when Walt and I were flying our final training sortie. We needed 100 hours in the jet to complete our training and attain Mission Ready status.

Somewhere over Colorado we had passed the century mark. We had made the turn in Arizona and the jet was performing flawlessly. My gauges were wired in the front seat and we were starting to feel pretty good about ourselves, not only because we would soon be flying real missions but because we had gained a great deal of confidence in the plane in the past ten months.

Ripping across the barren deserts 80,000 feet below us, I could already see the coast of California from the Arizona border. I was, finally, after many humbling months of simulators and study, ahead of the jet. I was beginning to feel a bit sorry for Walter in the back seat. There he was, with no really good view of the incredible sights before us, tasked with monitoring four different radios. This was good practice for him for when we began flying real missions, when a priority transmission from headquarters could be vital. It had been difficult, too, for me to relinquish control of the radios, as during my entire flying career I had controlled my own transmissions. But it was part of the division of duties in this plane and I had adjusted to it. I still insisted on talking on the radio while we were on the ground, however.

Walt was so good at many things, but he couldn't match my expertise at sounding smooth on the radios, a skill that had been honed sharply with years in fighter squadrons where the slightest radio miscue was grounds for beheading. He understood that and allowed me that luxury. Just to get a sense of what Walt had to contend with, I pulled the radio toggle switches and monitored the frequencies along with him. The predominant radio chatter was from Los Angeles Center, far below us, controlling daily traffic in their sector. While they had us on their scope

(albeit briefly), we were in uncontrolled airspace and normally would not talk to them unless we needed to descend into their airspace.

We listened as the shaky voice of a lone Cessna pilot asked Center for a readout of his ground speed. Center replied: "November Charlie 175, I'm showing you at ninety knots on the ground." Now the thing to understand about Center controllers was that whether they were talking to a rookie pilot in a Cessna or to Air Force One, they always spoke in the exact same, calm, deep, professional, tone that made one feel important. I referred to it as the "Houston Center Voice." I have always felt that after years of seeing documentaries on this country's space program and listening to the calm and distinct voice of the Houston Controllers, that all other controllers since then wanted to sound like that ... and that they basically did. And it didn't matter what sector of the country we would be flying in, it always seemed like the same guy was talking. Over the years that tone of voice had become somewhat of a comforting sound to pilots everywhere. Conversely, over the years, pilots always wanted to ensure that, when transmitting, they sounded like Chuck Yeager, or at least like John Wayne. Better to die than sound bad on the radios.

Just moments after the Cessna's inquiry, a Twin Beech piped up on frequency, in a rather superior tone, asking for his ground speed.

"Ah, Twin Beach. I have you at one hundred and twenty-five knots of ground speed."

Boy, I thought, the Beechcraft really must think he is dazzling his Cessna brethren.

Then out of the blue, a Navy F-18 pilot out of NAS Lemoore came up on frequency. You knew right away it was a Navy jock because he sounded very cool on the radios.

"Center, Dusty 52 ground speed check."

Before Center could reply, I'm thinking to myself, hey, Dusty 52 has a ground speed indicator in that million dollar cockpit, so why is he asking Center for a readout? Then I got it, ol' Dusty here is making sure that every bug smasher from Mount Whitney to the Mojave knows what true speed is. He's the fastest dude in the valley today, and he just wants everyone to know how much fun he is having in his new Hornet.

And the reply, always with that same, calm, voice, with more distinct alliteration than emotion:

"Dusty 52, Center, we have you at 620 on the ground."

And I thought to myself, is this a ripe situation, or what? As my hand instinctively reached for the mic button, I had to remind myself that Walt was in control of the radios. Still, I thought, it must be done -in mere seconds we'll be out of the sector and the opportunity will be lost. That Hornet must die, and die now.

I thought about all of our sim training and how important it was that we developed well as a crew and knew that to jump in on the radios now would destroy the integrity of all that we had worked toward becoming. I was torn. Somewhere, 13 miles above Arizona, there was a pilot screaming inside his space helmet.

Then, I heard it. The click of the mic button from the back seat. That was the very moment that I knew Walter and I had become a crew. Very professionally, and with no emotion, Walter spoke:

"Los Angeles Center, Aspen 20, can you give us a ground speed check?"

There was no hesitation, and the replay came as if was an everyday request.

"Aspen 20, I show you at one thousand eight hundred and forty-two knots, across the ground."

I think it was the forty-two knots that I liked the best, so accurate and proud was Center to deliver that information without hesitation, and you just knew he was smiling. But the precise point at which I knew that Walt and I were going to be really good friends for a long time was when he keyed the mic once again to say, in his most fighter-pilot-like voice:

"Ah, Center, much thanks. We're showing closer to nineteen hundred on the money."

For a moment Walter was a god. And we finally heard a little crack in the armor of the Houston Center Voice, when L.A. came back with, "Roger that Aspen. Your equipment is probably more accurate than ours. You boys have a good one."

It all had lasted for just moments, but in that short, memorable sprint across the southwest, the Navy had

been flamed, all mortal airplanes on freq were forced to bow before the King of Speed, and more importantly, Walter and I had crossed the threshold of being a crew. A fine day's work.

We never heard another transmission on that frequency all the way to the coast. For just one day, it truly was fun being the fastest guys out there.

Contributed by **Hugh Christian**

World Models 1/3rd Scale Cub Build Don Schultz



Since I had helped Bob Beardsley build his Model Tec 1/3rd Scale Cub I had decided to get the same plane. It is well constructed and sturdy and a good flyer. Then low and behold World Models made their 1/3rd scale Cub announcement.

Off to RC Modeler NW, talk to Pat and Dick, get it on order and wait. Didn't wait long, two weeks later it was here.

One wing was slightly crushed in shipping. I decided to repair it because only two ribs were cracked. Dick called the distributor and they sent covering for the repair. It was an easy fix and you have to look twice to find the repair.

This plane is really complete out of the box. All you really have to add is the servos, radio and engine. I did of course make some changes. The landing gear was replaced with Robart Cub Gear, The tail wheel assembly was replaced by a three leaf spring system including chain and spring steering.. The entire gear system proved very successful during the taxi tests.

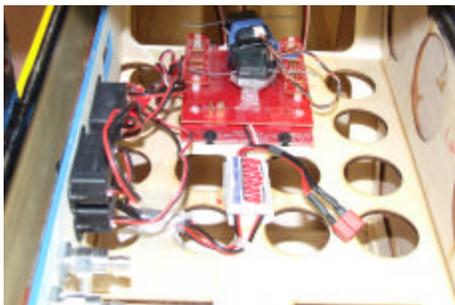
The WM prototype used a Zenoah 80 cc engine which is rather heavy. I planned to use a ZDZ80B2, it's an 80 cc but it's a pound lighter. Therefore the engine installation plan moved the engine forward one inch to compensate for the weight difference.

The engine is mounted on Desert Aircraft three inch standoffs. This makes for a clean engine installation with easy access to the rear mounted Walbro carburetor. This of course made the cowl that came with the plane to short. The cowl was replaced with a cowl from Fiberglass Specialties which was an inch longer than the WM cowl. The cowl was split into an upper and lower section to enable it to fit around the twin cylinders of the engine. Since I'm using a unitized muffler, where both cylinders feed the exhaust into a common collector that exits below the cowl addition sections of the cowl had to be removed to accommodate the muffler.



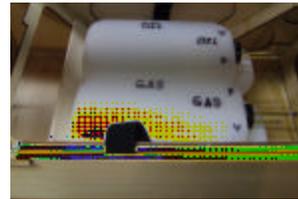
A hatch was cut in the bottom front of the plane just behind the firewall to accommodate the battery installation. Four Fromeco lithium Ion 2400 mAh batteries were secured to the hatch cover. The battery leads plug into a buss block to allow easy connection of the battery packs. Four packs were used, two for the receiver through a Smart-Fly Battery Share unit, one for the ignition and one for the smoke system. Yes we have smoke.

Power to the servos and receiver is distributed through a Smart-Fly Power Expander regulated by a Fromeco regulator. The ignition system controlled by a Smart-Fly Optical Ignition Cutoff regulated by a Smart-Fly Ignition Regulator. The smoke system is powered directly from its pack without regulation. The smoke pump controlled by receiver, gear switch and the throttle can run on battery power up 12 volts. The smoke pump is a Sullivan Skywriter and the injector nozzles are from RC Showcase. Can't wait to test this system.



The servos are all Hitec digital metal gear servos with the exception of the throttle servo which has Karbonite gears. There is a HS-5595TG on the rudder and a HS-5645MG on each aileron and elevator half. The servo leads are all cut to length and soldered to reduce the voltage drop of the typical long run plug connections. Since the Spektrum AR7000 receiver is used there is no engine noise or static pickup from long run servo extensions.

The expendables, gas and oil, were moved from the prototype positions to a space directly under the center of gravity. Each tank holds twenty four ounces of gas or oil and as the consumable is used there is no shift in the center of gravity. All of the filler fittings, switches and charge receptacles are inside the outer doors so nothing protrudes to the outside of the plan with the exception of the vent fittings.



The radio system is the Spektrum DX-7 using the AR7000 receiver. Since this is a scale plane it seemed logical to use a control sequence different than the traditional dual rate concept. I think dual and triple rates are required in IMAC and Pattern to reduce Pilot work load but is not required in sport flying. Some tests with high expo rates will be made using the Super Flying King after all it's called the Orange County Choppers Cub so it should fly like a Cub. High and low rates were set equal and the end points were used to set the control service throw limits. For starters the rates were set at:

- Rudder travel 100%, dual rate 100% and expo 30%.
- Elevator travel 55% down, 60% up, dual rate 100% and expo 70%.
- Ailerons 70%, differential 40%, dual rate 100% and expo 70%.

After several test flights it was apparent the rudder and elevator were on the wrong expo curve, to much change for the stick input feel. The rudder expo was adjusted to 50% and the elevator was adjusted to 85%.

These settings smoothed out the control reaction. The basic flight maneuvers were clean without pitch and yaw corrections to maintain altitude. Landing was the real proof, no bounce touch downs indicate the elevator expo is correct.

The weather turned to its usual winter self so further testing will continue in late spring.

The Cub is setup as follows:

- Rudder travel 120%, dual rate 100% and expo 40%.
- Elevator travel 80% down, 80% up, dual rate 100% and expo 70%.
- Ailerons 50%, differential 50%, dual rate 100% and expo 70%.

These settings were adequate for the taxi tests and ground handling was excellent.



The taxi test and the final adjustments are complete. We are waiting for a good sunny day with moderate wind to do the maiden flight.

Wing Span 141 inches.

Length 91½ inches.

Takeoff Weight 32 pounds.

Maiden flight report will come sometime in the future.

Presidents Soapbox *from page 1*

and improve the site, **and simply just having fun**, fall into place much more easily. I would like everyone to think of Fly-A-Ways as **“radio controlled flying at its best”**.

My vision of a 1st class flying facility starts with one that's well groomed and maintained. It's a friendly and fun place to spend a morning, afternoon, all day, or all weekend of flying. It has parallel grass and smooth surface runways....each wide enough and long enough for larger aircraft. Pilots face north so the sun is always at your back any time of day. The site is large...80 acres for a fly-zone... and away from houses. There's room for multiple flying disciplines at the same time.....maybe separate areas for park fliers

and helis. I would like to be able to hold a public or inter-club event for fun and fundraising...and where there could be occasional overnight camping for those attending an event. As John Lennon sang in one of his songs....”**You might call me a dreamer, but I'm not the only one...**”

All we need to do is figure out how to do it. I'd like to hear your views and opinions, so don't be shy about telling me what you like and dislike.

Enough for now ...see you at the field.....when the rain lets up.

Scott

TEAM 6th Annual Flying Model Exhibit

As I write this, the Evergreen Aero Modelers are in the midst of their 6th Annual Flying Model Exhibit at the Evergreen Aviation Museum in McMinnville. The exhibit is (was) February 23rd-25th. All modelers are invited to bring planes for public display. Categories include Radio Control, Control Line, Free Flight, and Helicopters. Planes are dropped off and registered late Friday afternoon and early Saturday morning. Members of the Evergreen club staff the registration table and direct modelers where to display their aircraft...typically models are displayed near or with full scale aircraft of the same type....I brought my SPAD XIII and it's displayed under the wing of the full scale Sopwith Camel. Museum visitors are invited to view and vote for their favorite models in the different categories. It's a nice way to present flying models to the public...at a great venue...the Evergreen Aviation Museum. Modelers don't have to hang around for the entire weekend. They can tour the museum for as long as they'd like, then pick up their models late Sunday afternoon. I was there Friday afternoon, and when I left at about 3:30 there were 34 models registered for display. More models were expected to arrive later in the afternoon and Saturday morning.

Click for Photos

Scott

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